Nudging Patient Compliance and Inter-Provider Relations through Discourse Mobility and Deliberate Practice: Negotiating Choice Architecture in the Field of Craniofacial Pain and Sleep Disorders

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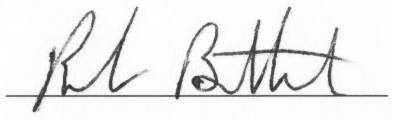

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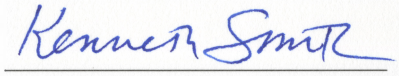

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Primary Discourse: A Family Tree of Beliefs and Values

I am a first-generation college student from a family of modest means, which is why we could not always afford to eat meat with our dinners (sometimes the local grocery store had good sales on featured cuts, though!). Yet, my dad, who lived a life based on the repercussions of the Great Depression, firmly believed that no one in our family should have to go without medical or dental care. For this reason, I never took doctors' appointments for granted, and I work to infuse the significance of such priorities in my patients by encouraging routine care. I give back to the community by participating in free dental days, volunteering at local income-based dental clinics, and dental mission trips, both nationally and internationally, in the hopes of achieving this.

These instilled values of prevention and general health awareness are thus part of what educational theorist James Paul Gee would call my primary Discourse. Gee, in "Literacy, Discourse, and Linguistics: Introduction and What Is Literacy," defines "Discourse" ("ways of being in the world") as a tool that permits an individual to authentically act a part that is discernable to others involved in the same "play" (526). He asserts, "[A] Discourse is a sort of 'identity kit' which comes with the appropriate costume and instructions on how to act, talk…so as to take on a particular role that others recognize" (526). In other words, one's costume in a given play equates with an identity kit (526). An individual actually has to talk the talk in order to effectively assume an acquired Discourse.

> Patient: *So, ur the dentist, right?*
>
> Me (as I am literally cleaning the patient's teeth): *No, miss. I'm actually your dental hygienist.*

Patient: *Oh, gotcha. So, what ur sayin' is you's Dr.---'s assistant.*

Me (with a hard mental slap to my forehead, smack between the eyes, as I yet again enter this conversation for the third time today): *No, a dental assistant helps the doctor.*

Patient: *Will you be doing my fillin's after this?*

Me (grateful that my hands are in the patient's mouth so that they do not become overly demonstrative in my frustrated, but very well concealed, response): *I know it can be pretty confusing. I, as a dental hygienist, am cleaning your teeth to remove all of the bacteria around the infected ones before Dr.--- treats the cavities on these teeth over here* (indicating two teeth on the UL, or upper left quadrant). *Her assistant is going to help her in the process.*

Competing Secondary Health Discourses Subvert

the Very Patient Care They Promote

I was successfully indoctrinated into one of my many secondary Discourses, that of the dental world, and more particularly the realm of DH's (dental hygienists), in May 2013, upon the completion of multiple clinical assessments and designated exams for licensure. According to Gee, a secondary Discourse is one that is acquired outside of the home and is derived from such institutions and organizations as one's church or school. He describes these "nondominant" Discourses as socializations learned "beyond the family and immediate kin and peer group" (Gee 527). Importantly, there is no expectation that everyone should assimilate into the same secondary Discourses. The previous conversation detailing the pt's[i] (patient's) inability to discriminate my identity kit is a testament to this. Her lack of specific dental details is expected and accepted because she likely has not studied the different roles and costumes present within a dental practice but has invested time in varying secondary Discourses and identity kits instead.

Patient: *Ouch!*

Me: *I'm sorry, sir, but I haven't even started yet.*

Patient: *I never bleed until you guys touch me 'n start pokin' 'n diggin' around. Ya' know?*

Me: *It's actually abnormal for gums to bleed. Do you flo--?*

Patient: *Ugh! Do you guys always have to ask that? Do you get bonused off it or somethin'? It's like you guys think us pts are in some kinda conspiracy against you just cuz we don't floss. You feel me? Hey, are you guys having any specials on whitening? I was reading online that you can*

make a home remedy of hydrogen peroxide, lemon juice...

Me (realizing that my pt is no stranger to whitening since his teeth are literally three shades, if not four, whiter than the sclera[ii] of his eyes, I proceed cautiously but decisively): *Yes, there's a featured promotion this month but we need to get your teeth healthy before we can even consider that.*

As if these kinds of conversations are not enough to self-identify hygienists, we can easily recognize fellow members of the same secondary Discourse because its respective identity kit is more than a way of talking; it includes one's attire, social cues, gestures, and values, among other qualities (Gee 526). Case in point, we wear brightly-colored scrubs (often with a print featuring gleeful, dancing teeth) and Dansko shoes. We even think we are so clever and unique when we reflexively carve pumpkins depicting happily bracketed smiles and can smell perio breath[iii] from a mile way. We also check out everyone's teeth and admit to some degree of OCD as our necessary attention to detail warrants—we pick at everything!

Nurse: *Oh, you're a hygienist...So, all you do is clean teeth.*

Me (after a polite chuckle that has been well rehearsed): *In reality, we're very much the same. I took the same classes as you. I have to know medications, take vitals, am CPR-trained, and have a license of my own. I, like you, make a difference in the lives of pts by arresting disease processes and promote pt ed* (patient education) *and self-awareness. Oh, and we both give pts injections. Honestly, the only obvious difference that I can see is the fact that DH's, unlike RN's* (nurses)*, have the autonomy to*

make their own dx (diagnoses).

Nurse (subtly smirking): *Hmm.... Must be nice to work a 9-5 job with no weekends.*

Me (wondering why I bother and yet admiring my own perseverance): *That's not really an accurate statement.* (I continue not even missing a beat.) *So, how many exams did you have to pass for your position?*

Nurse: *Two.*

Me: *Oh, wow. That must have been hard. I mean, I know others who only needed to take one since they didn't want to specialize.*

Nurse: *Definitely! And it only took me two attempts to pass the NCLEX.*

Me: *Good for you! I know how stressful of a time that must have been since I had to take five separate exams myself. I was pretty lucky, though—I passed them all the first time around.*

Nurse (here comes that infamous smirk again): *Well! My friend in NICU says your tests are pretty easy...*

Yes, the last, and perhaps most important, common denominator in uniting us is the general distaste RN's have for us lowly DH's as they look down upon us from their well-shined pedestals…but, for better or worse, we never miss an opportunity to defend our hard-earned degrees. It is more than their overt disgust of saliva that divides us, however: so many RN's fail to recognize that we are on the same team and want the same thing, the stabilization in health of our pts.

As if the RN-DH rivalry is not enough, many DH's, including myself, have worked in offices that promote distinctions between co-workers. For example, I was

employed in an office that believed in segregating DA's (dental assistants) from DH's per the color of lab jacket we were expected to wear. I did not consent to such a hierarchy and usurped authority when I, as the only DH in the office, refused to stand out. I wore the same color as the three DA's and helped them turn over (disinfect and sterilize) rooms when I was not with other pts. I promoted an environment conducive to teamwork, one that had not been present since the retirement of the DH I replaced. (She had worked in that particular office for the last 23 years.) I witnessed the devastating effects such power dynamics had on the staff and together we worked to change it so that all team members recognized that their voices mattered in the day-to-day operations of the practice. We all had a part to contribute in the overall health of our pts despite the distinctive roles and positions within the office.

An unanticipated drawback to the comradery I helped to nurture was the altered perception of my role, especially from the pts' perspective. At the time, I did not recognize my own efforts at subverting my secondary Discourse; I effectively attempted to disown my identity kit. Pts could not discriminate the difference between my four-year DH degree and a ten-month assisting program often taken for a quick route of entry into the working world. I was simply and systematically degraded to the person pts dreaded seeing every six months. In looking back, I can respect my former employer's attempt to maintain my co-workers' division and the preservation of our adopted identity kits for the sake of pt understanding. In *Nudge: Improving Decisions about Health, Wealth, and Happiness*, Richard H. Thaler, an American economist, and Cass R. Sunstein, a legal scholar, associate such a hint with an element of design "that alters people's behavior in a predictable way without forbidding any options" (6). Put in another light, nudging creates

a situation that caters to a desired result. Thaler. et al. offer the scenario of architects who design wider stairwells in office buildings to promote mingling among staff members in different departments in addition to physical exercise (4). To specify, architects create a context under which individuals are more inclined to choose a beneficial option, though not under duress. Again, in acknowledging the inherent disconnect between pts' preconceived notions of practice responsibilities and actual office roles, my former employer was trying to nudge, or represent, my team's distinctions simply by reducing the staff to our respective identity kits.

The Benefits of One Secondary Discourse Prompts Excellence in Another

I branched into an offshoot of my DH Discourse a couple of years later, during a time when I worked for an office that bombarded me with ethical dilemmas on a daily basis. I was overbooked (not just double-booked) and made to feel as if my job was in jeopardy when I did not consent to rush through my pts' appts (appointments) in order to keep our numbers (production) up. My OM (office manager) would have easily turned a blind eye if I "missed" plaque and build-up (calculus[iv], or mineralized deposits) on pts' teeth. My new career has enabled me to approach the dental field from a medical standpoint, and I am fortunate that I never question whether the txr (treatment) plans we prescribe are ethical. I am thankful for my latest team that has created a wonderful niche for ourselves as a specialty practice. We currently see more pts with craniofacial pain (jaw pain, migraines, and headache pain) and sleep disorders in a single day than any other office in the world.

Such a move to the TM (jaw pain and sleep) world is straightforward from an outsider's perspective. More specifically, such a lateral transition implies an adjacent, gliding move from one field to another without requiring a deeper, more thorough awareness beyond that gathered in my DH Discourse. This is very different from what American essayist Sven Birkerts describes in "The Owl Has Flown" as a concentrated focus on a given concept, a sense of vertical engagement, which demands one's time and commitment to discovering crucial truths beyond the superficial (72-3). My horizontal shift was fairly simple and easy because I am equipped with the unique, but necessary, vocabulary; still, there are subtle differences. I no longer deal with PA's (periapical radiographs, or x-rays, that show the roots of teeth) or BWX's (bitewing x-rays valued

for their ability to show interproximal caries, or cavities between the teeth). The x-rays I currently take, in a 3-D format as opposed to a 2-D projection, do not require a lead apron for protection as a result of updated ADA (American Dental Association) guidelines stating a lead apron, under such conditions, actually functions to trap radiation within a pt's body. Nevertheless, I quickly realized that I needed to modify my walk, or my external identity kit, requiring a vertical move wherein I was rewired to disdainfully consider scrubs as a very unprofessional form of dress. They are unacceptable at work because scrubs look so sloppy (a true shame as anyone who has worn them can attest to their comfort!). My new identity kit includes dress pants with a supplemental logoed jacket. My hair must be dry when arriving at work and a light touch of natural makeup accents my self-presentation. My team ultimately dresses to the level of care we expect to provide as well as to the caliber of treatment pts anticipate from us.

My team's quality of dress is magnified by our non-traditional waiting room that emphasizes a calming atmosphere with dim lighting that is appropriate for chronic pain pts who are sensitive to varying sensory stimuli. We have also eliminated the background noises of the high-pitched drills, suctions, and cries from babies undergoing frenectomies[v]. We offer beverages and light snacks that are GF (gluten-free) and dairy-free. The notorious table display of countless magazines is gone; in its place, we offer a small library of books concerning the dietary guidelines our staff respects and encourages pts to follow (*Exhibit A*). This is a subtle attempt at nudging our pts by priming them to "ingrain" the value of a GF way of eating. In this manner, when the dietary guidelines are proposed as a part of their txr, pts can quickly link it back to gluten's harmful effects in causing systemic (bodily) inflammation (hence magnifying pts' pain), which they learned

about in the informative PowerPoint presentation playing on the TV monitor in our waiting room (*Exhibit B*). Repetition is important for our pts, many of whom suffer with life-altering insomnia and/or debilitating pain. So, if they have been exposed to the idea at least once prior to formally meeting the clinical staff (which, for us, happens minimally in our waiting room), when we bring up the theme again, it is more likely to resonate with pts and they have a better chance of remembering our recommendations. Despite my team's suggestions, we must be careful so as not to flood our pts with information: when my co-workers and I impart too much material from our adopted secondary Discourse, we run the risk of pts shutting down.

> Patient: I'*m here because I have TMJ.*
>
> Me: *Of course you do. Actually, everyone should have two TMJ's (or temporomandibular jaw joints). What you call TMJ we actually refer to as TMD* (temporomandibular dysfunction).
>
> Patient: *I never knew that! You can still help me, can't you? I've been to the neurologist and rheumatologist and so many other doctors that I can't even remember their names…which reminds me, here's a copy of my latest MRI. Everyone keeps telling me it's all in my head but I haven't been myself in years.*
>
> Me: *You're like our typical patient that we help on a daily basis. I'm gonna collect a bunch of information. Nothing's invasive but it's a very thorough exam, the results of which will allow Dr.--- and you to come up with a game plan so that we can get you feeling better and back to work.*
>
> Patient (between loud sobs): *That sounds wonderful!*

As has been previously alluded to, one subset of the pt base I see presents with sleep-related concerns that threaten their daily abilities and mere existence. In "Sleep Problems, Health-Related Quality of Life, Work Functioning and Health Care Utilization among the Chronically Ill," researchers Michael Manocchia, San Keller, and John E. Ware mention that "60-70 million Americans suffer from some form of sleep problem" (331). Additionally, a lack of sleep has direct effects on any and all aspects of one's health: "Coupled with chronic physical health conditions, [a] sleep disturbance can exacerbate the condition, disrupt treatment, cause further complications and add to the social disability associated with illness" (Manocchia et. al 332). This makes sense given one of the many things that I have learned as part of my TM Discourse: physical and cognitive repair occur once a person enters the deeper stages of sleep, starting with phase III. Failure to spend sufficient time in the later stages of sleep directly links to pts' inabilities to heal from injuries as well as bodily aches and pain. It is also associated with their frustrations regarding recent weight gain and/or failure to lose weight despite eating healthfully and having a rigorous workout routine. Moreover, many of the pts I help txr are burdened with memory loss, depression, and anxiety, again to due to a lack of restorative sleep. This, paired with their deoxygenation[vi], minimizes pts' adaptive range; they are literally climbing an uphill battle to survive in what used to be their normal day-to-day activities. Consequently, we have to be mindful of how much information my clinical team distributes at one time so as not to submerge pts with an overabundance of material.

Nudging in Thaler et. al's understanding of the term is not a forceful shoving but an offering of choices via verbal and non-verbal cues and presentation that, from a

medical standpoint, enables, again it does not compel, a pt to make educated decisions that lead to health. As has been previously shown, my current specialty works tirelessly to promote the vertical inclusion of pts and external healthcare providers. This is one of the biggest differences between my DH and TM worlds: affiliates of the TM Discourse are not an elitist sect nor do we desire to be one. My fellow members and I encourage others to join our Discourse through nudges (personal value-driven incentives) in the sense that we ensure our methods and procedures align with pts' goals for txr because they need to see the value in proceeding with it. We are essentially tapping into the consciences of our pts so that they ultimately choose the best options in restoring function to their lives. This happens once my co-workers and I are able to connect the dots of their test results (allowing for the fine print and exceptions that popular media sources often leave out) and how these relate back to the symptoms that originally brought them to our office. Furthermore, it is necessary to stress to pts that my team is going to do all that we can on our end and in our power to make them feel better but it requires equal, if not more, work on their part. Throughout the process, my co-workers and I request that pts do things outside of the practice and the more committed they are, the better and quicker pts will progress through our txr with measurable improvements. We cannot offer a panacea in place of pt effort.

> Doctor: *When you first came in today, you stated that you're seeking relief from your HA's* (headaches) *and jaw pain. A victory for you would be to live pain-free so that you can start attending Sunday service with your family again. Would you say that I summarized your goals for txr accurately?*

Patient: Yes, exactly.

Doctor: *Great. In order to get you feelin' better, we need to fabricate a custom orthotic that takes the grinding forces off your back teeth and centralizes the biting power on the front ones instead. So that you understand what I'm saying, I'm going to have you put your hands right here* (Dr.--- points to the pt's temples bilaterally. She is sitting with fingers placed on both sides of her head). *Okay, go ahead and bite down on your back teeth. Feel that muscle bulge?*

Patient: *Yes.*

Doctor: *Now, only bite on your front teeth. See how you can no longer feel that muscle bulging?*

Patient: *Yes.*

Doctor: *It's like if I asked you to place an almond between your posterior* (back) *teeth, you could easily crush it...but if you put it between your anterior* (front) *teeth, you cannot generate enough force to break it. So, by allowing those muscles to relax, we'll be able to decrease your temporal HA's.*

Patient: *That sounds great!*

Doctor: *Also, by using this one, there's an added benefit. We can adj* (adjust or titrate) *it by changing these rods you see here* (pointing to the sides of the orthotic). *Doing so helps prevent your airway from closing off at night when your muscles unconsciously begin to sag and relax. As we have already shown, your cheek muscles are in tetany* (spasm) *since they*

are constantly firing to maintain your airway at night. This is an ideal orthotic for you because it will help with your reported dry mouth upon waking too—its design is intended to keep your tongue positioned on the hard palate (roof of the mouth) *behind your top front teeth. Breathing in this way means your mouth will be closed more often, so your oxygen levels will not desat* (drop) *as much. We know that deoxygenation at night contributes to HA's like the ones you suffer with each morning. This orthotic is also important because we ultimately need to get you off your daily regimen of Ibuprofen in order to preserve your gut bacteria, especially given your history of Crohn's.*

Patient: *This sounds nice'n all...but how much is this going to cost me?*

Doctor: *I don't deal with the numbers; I have staff to handle those matters. She* (D.--- acknowledges the txr coordinator) *is going to review all of this with you before we get started today. I will say this, though, the fee is minimal when compared with getting you healthy and eliminating the pain you have been dealing with for the past twenty years.*

Patient: *Hmm. I think you're right. I hadn't thought of it like that! Can we get started right away?*

Had Dr.--- not used a roofing analogy (not included in the conversation above) to clearly show the association between the pt's symptoms and proposed txr, she may have been unable to understand the connection between her chronic HA pain (the leaky ceiling tile) and untreated mild OSA (obstructive sleep apnea[vii]), the hole in the roof. Had he not recognized what motivated the pt to come in initially, on that particular day, it is quite

possible that she would not have consented to txr even though her untreated OSA is, from our point-of-view, of an utmost priority (it can mean the difference between life and death if left untreated). This is all the truer if the pt is only concerned with getting rid of the jaw joint noises that give her so much social anxiety that she has cx (cancelled) her last four lunch dates with girlfriends. It is a matter of being upfront with the pt by offering the txr plan as what Dr.--- would do if he was talking with his mother, sister, or wife, etc. This hints at the fact that Dr.--- is offering optimal care rather than shortchanging her due to any unspoken assumptions that she cannot afford txr; this is never to come in the way of presenting what is best for a pt. In doing so, a pt voluntarily chooses health over ignorance or self-negligence because of our nudging (the pt is not mandated or coerced, terms that are suggestive of manipulation).

Intentional Modification of Patient Education with the Purpose

of Enabling Expansion of Secondary Discourses

However, it is more than pts' health conditions that factor into the method of delivery for educational information; we need to take into consideration their health literacy. According to co-founder and director of the Health Literacy Institute at the University of New England in Portland, Maine, and president of a consulting firm, respectively, Sue Stableford, and Wendy Mettger's "Plain Language: A Strategic Response to the Health Literacy Challenge" acknowledges an obvious disparity between the American layman's reading comprehension and the level of health-related information supplied in a written text format for general public consumption. They state,

> Low health literacy is a major challenge confronting American and international health organizations…adults with limited literacy skills know less about their health problems, are less likely to engage in certain preventative behaviors, less likely to comply with self-management regimens for chronic health conditions, and more likely to have poor health and more frequent hospitalizations (71, 73).

Still, it should come as no surprise that healthcare practitioners take an oath to do no harm (non-maleficence) and to help others, so this drop off in pt understanding of written materials cannot be overlooked in good conscience. Stableford et. al propose a solution based on the findings of reading researchers: to use plain language that makes printed text easily accessible to target audiences. This means designing a format that is easy-to-read and pt friendly (75). It is important to note that the implementation of plain language is not meant to imply the conveyance of information in a belittling manner through the use of small words or by " 'dumbing things down' " (Stableford et. al 75). Plain language

precisely refers to writing that is succinct and transparent; these tactics are appropriate and adaptable across mediums like that of online sources. Moreover, healthcare professionals' focus on the crafting of pt educational materials that facilitate readers' attention and interest has a two-fold effect: it increases pt compliance through understanding, which, in turn, makes a healthcare team's job that much easier.

In spite of the incorporation of plain language, pt ed is fruitless in the absence of proficient clinical team members who are capable of conveying an introductory briefing on the materials. Researchers Jan C. Wouda and Harry B.M. van de Wiel appropriately address the topic of pt ed in "How to Attain Expertise in Clinical Communication?" as they argue that new clinicians are inadequately prepared to communicate effectively, let alone orally in varied clinical settings. This is in direct opposition to the fact that there is comfort in knowledge. For starters, they define pt ed to mean:

> [T]he use of education methods, such as the provision of information, advice and behaviour modification techniques, to influence the patient's knowledge, opinions and health and illness behaviour in order to ensure that the patient is able to co-operate effectively in deciding on the care which he receives and can make the best possible contributions to that care (214).

While recent graduates may excel in the ability to gather an adequate HH (health history intake), the more challenging a pt's situation proves to be, the more problematic it becomes for the recent graduate who has gained competency in less complicated cases. It would seem, then, that modified pt educational materials would also help facilitate explanations and the imparting of information on behalf of a practitioner to a pt. Put differently, the employment of plain language is mutually beneficial in empowering

healthcare professionals to be efficient and successful verbal communicators while pts become well informed so as to make educated decisions regarding how to proceed in an effort to achieve and maintain a desired level of optimal health.

We have had to consistently work to manage information dispersal from those within our circle, our adopted secondary Discourse, to those on the outside of it; my team has successfully accomplished this through the implementation of plain language and by respecting the time it takes our pts to process and accept new information (which can vary from one pt to the next). As far as the sequencing of our appts go, we originally provided pts with our written handouts on the anti-inflammatory guidelines, the Deflame Diet (*Exhibit C*), shortly after they had spent a solid twenty minutes reviewing the results of their testing with Dr.---. My co-workers and I did not take into account that their heads were already spinning with too much information and yet we could not figure out why, at the next follow-up visit, they were non-compliant in adhering to these dietary recommendations. Some would admit outright that they did not even review all (or any) of the material we gave them because it looked daunting and oppressive.

My team had to step back and re-evaluate how to make our pt ed more conducive to pt motivation, which is why we decided to postpone dispensing such information until after pts had time to reflect upon the details of their test results from the previous appt. In doing so, my co-workers and I found pts were willing and open to trying the Deflame Diet for a minimal trial period of four weeks; we no longer experienced so much resistance up front. Another challenge my team faced was the backlash we received from pts for being sent home with too much reading material at once: "It felt like doing homework." In order to rectify this, our marketers stripped some of our printed material

of its redundancies, leaving only the necessary technical terms like those used to describe diseases and treatment options. Then we re-designed the layout to include more visually pleasing listing strategies as well as acquired recipes (in both printed text and online formats) with supplemental photos to eliminate the opportunity for pts to make excuses that they do not know how to cook in accordance with such "restrictions."

Assistant: *As Dr.--- pointed out in your exam, there's evidence of inflammation in your jaw. We know that certain foods contribute to and perpetuate such inflammation and that bodily aches and pains feed off of these foods.*

Patient: *Oh, no worries. I don't need this. I already eat pretty healthy.*

Assistant: *Okay, great. So, what did you have for breakfast this morning?*

Patient: *I had two slices of buttered toast with yogurt and a glass of orange juice.*

Assistant: *Actually, the three main principles of the Deflame Diet are the elimination of gluten, dairy, and added sugars. So, your breakfast this morning included foods from all three of these categories. You may as well have had a candy bar instead.*

Patient: *Really? What am I supposed to eat? Pizza is literally my favorite food!*

Assistant: *I realize this will be difficult at first. We here at --- believe in practicing what we preach, so we follow these guidelines as well. And, it's actually quite doable although it initially poses a struggle. We literally had to relearn how to eat. Let's take a peek at the information I'm holding*

and determine what it means for you.

Having this discussion with pts was difficult at first because, in order to have those candid conversations, we too had to dispense with the widely-accepted information that so many of us have learned in health and nutrition classes in school, namely the Food Guide Pyramid and MyPlate. My co-workers and I also had to change our wording so as not to offend or stress our pts, specifically those with a history of disordered eating. Rather than emphasizing these guidelines as a diet to be followed, we describe these parameters as a change in eating habits that are meant to help pts improve to their maximum benefit and to do so in a timely manner. Relatedly, my team had to evolve (and continue to do so) to meet pt demands; when relaying vital information, we use plain language and a case-by-case timing of when pts are ready to acquire and learn additional information like the Deflame dietary guidelines.

Our next move was to offer handouts based upon their visual appeal and pt accessibility. We began to include more pictures and diagrams with accompanying captions and a general reduction in the amount of print featured on each page. For instance, my co-workers and I now offer an entire page dedicated to the depiction of alternatives to cooking with flour (*Exhibit D*). My team was initially hesitant to include a word search activity (*Exhibit E*) featuring GF grains for fear that it would come across as too juvenile. Surprisingly, this was not a problem as it appealed to our younger pt population. With respective clinical backgrounds as an obstetric nurse and nurse practitioner midwife, Carol Shieh and Barbara Hosei's "Printed Health Materials: Evaluation of Readability and Suitability" outlines the biggest mistakes individuals make when developing and dispensing pt ed materials. These errors include a lack of "summary

to retell key messages…and problems or questions for reader responses in order to promote interaction" (Sheih et. al 83). Admittedly, we do not present our information in a question-and-answer format, but my co-workers and I certainly encourage pt involvement as in the example of the word find just described. This is an obvious improvement upon *Exhibit C*—although it has clearly demarcated sections with related subtitles, it is still too wordy. *Exhibit F* is a pocket-sized summary of the information condensed from *Exhibits D* and *E* and is ideal for a quick glance and subtle reminder. In the end, our goal and motivation was to recap our information from various angles because my team is already aware of its value for our pts (*Exhibits C, D, and E*).

Having alternative formats for the printed material we offer is likewise key in engaging pts across the spectrum; this is done in addition to verbal training. Just as my co-workers and I believe in onboarding (training) new members in accordance with their preferred style of learning, we endeavor to do the same for our pts. This is consistent with nurse Kari Sand-Jecklin's contention in "The Impact of Medical Terminology on Readability of Patient Education Materials." She references the Joint Commission for Accreditation of Healthcare Organizations because it "requires that patients be taught in a manner consistent with their abilities and learning styles, and that the information must be presented in a way that is understandable" (119-20). This is noteworthy given the recent changes to our healthcare system that limits the amount of face-to-face time providers can feasibly spend with their pts. As a result, the more streamlined the educational portion of an appt, the more a pt is able to get out of his or her limited exchange with a PCP (primary care provider). Sand-Jecklin points to the necessary role of pt-provider interaction in pt ed because the influence of printed text alone is not

enough to guarantee that pts will modify or change their behavior (127).

Nutritionist: *Okay, so why are you still prescribing this Deflame Diet to your pts? They need to be smart about their food choices. You know I had to conduct research about all the diets and fads as a part of my graduate coursework, right? There's no foundation in any of them.*

Assistant: *First, we do not intend these guidelines to function as a diet, let alone a weight loss regimen. We are making our chronic pain pts conscious of the fact that they can minimize the intensity of their pain by what they put in their mouths, by what the pts consume. Second, we are not prescribing anything. We cannot force pts to do anything. You of all people should know this.*

Nutritionist: *I am sorry but I just do not approve of your recommendations. You will have to find support elsewhere.*

Assistant: *It is apparent that you do not understand what we are asking of our pts. We want them to eat GF (fresh and organic foods minus the overabundance of carbohydrates) without eating products specifically marketed as GF because they often contain an extremely high concentration of high fructose corn syrup*[viii]*. These foods have highly inflammatory markers in them.*

Nutritionist: *What about dairy? How do you expect pts to get adequate sources of calcium and vitamin D?*

Assistant: *Humans aren't supposed to drink milk past the age of breastfeeding but our society drinks the milk of other animals throughout*

adulthood. As for your concern for calcium and vitamin D, they should have no trouble getting enough so long as pts are truly adhering to these guidelines of eating healthier. It is easy to get calcium and vitamin D from an appropriate amount of fruits and vegetables on a daily basis. What it comes down to in the end is that you are strictly thinking from a nutritional viewpoint but what you have to realize is that we also have to take into account that many of our pts are in severe pain, which is exacerbated by the foods they eat. Once pts remove these destructive foods from their diet, they are going to become addicted to feeling better. Pts will naturally want to stay away from certain kinds of food because of how poorly they feel after eating them.

Horizontal Knowledge: The Drawbacks to Medical Diversification

Just as we nudge, or influence, our pts in the direction of optimal health, my co-workers and I try to educate other health providers as well. My team has multiple motives in doing this. Primarily, we need them to understand what my co-workers and I do in an effort to receive more referrals from them, which in turn produces more pt flow and production for us. This is equally important for my team as a means of ensuring pts receive proper care via the most conservative means feasible. Even as pts fall into the trap of thinking that they know enough to prescribe their own self-txr, pts also tend to believe in the omniscient practitioner who possesses unfailing abilities, all because such a person happens to have a few initials after his or her name. Regrettably, healthcare professionals are just as guilty in thinking those initials entitle them to treat any and all pts they come into contact with, regardless of their lack of expertise in varied disciplines. Their rose-tinted glasses[ix] make the reality of deferring to those who specialize in treating such pts all day every day imperceptible.

Unfortunately, doing so is an omission of their horizontal awareness and acknowledgement that they may have unintentionally provided txr that was not in the best interest of their pts (because it did not meet acceptable and appropriate standards of care). What one provider regards as the best solution for a pt, such as orthognathic (jaw) surgery, my team considers a last resort option. For instance, we are currently treating a pt who happens to be a beautiful girl of 22 years. She felt it necessary to withdraw from her senior year of classes at an Ivy League school to have what would turn out to be a series of thirteen jaw surgeries. The pt will be on a liquid diet for the rest of her life, when all she wants to do is eat her favorite food, scrambled eggs. Had the pt come to us

first, she would have learned that her case is just like our average pt and my co-workers and I could have treated her with non-invasive methods. Sadly, our hands are tied since the pt's previous doctors and surgeons have irreversibly altered her jaw bone beyond repair. This does shed light on a key point in highlighting the pt and her family's mistaken assumption that money could buy them a vertical familiarity. The restrictions inherent in her family's horizontal comprehension made them believe that the more expensive a txr, the more likely it would help. Such a tragic case study points to the necessity of my co-workers and me continuing to work to educate other healthcare professionals to recognize the limitations of their skills and the value of collaboration among specialties when treating pts.

Accordingly, my team needs provider compliance as much as we require a pt's agreement to thoroughly follow our recommendations when in txr. In order to foster these kinds of relationships, we have had to be strategic. Our tactic includes calling a given practice that my co-workers and I want to make a connection with and interviewing its doctor about what he or she does and the kinds of pts he or she treats. Then, we praise the practitioner for the good he or she is doing in our community and explain that my team plans to send a pt over so that he or she can help us help a pt. Naturally, as the physician becomes comfortable seeing pt referrals from us, the process will reverse itself so that the provider sends pts to our office too; thus, our scheming ultimately works in our favor. This serves as a noted deviation from Thaler et. al's use of nudging. Such flattery augments my team's nudging in order to establish initial exchanges with professionals who are unfamiliar with our practice. This sets the foundation for a relationship based upon reciprocal nudging and referrals.

Effective communication is not only crucial in pt-provider relations, it is necessary in provider-provider associations as well. On the one hand, we work with a local ENT[x] (EAR, Nose, and Throat doctor) who was very hesitant in helping my team's pts or referring pts to us. Dr.--- enabled him to see the significance in our relationship. The more we could do for a mutual pt from our side, the more it freed up his schedule in terms of the benign and routine appts so that he could focus on the high-dollar surgery cases that Dr.--- enjoys most. My co-workers and I are saving him a step as the middleman. On the other hand, we work with a local orthodontist who was initially unwilling and very resistant to do maxillary and mandibular expansion (broadening of the upper and lower dental arches) in the way my doctor requested. This is why we registered him for the same classes my team had enrolled in by the mentor who trained us. Once he understood the connection between improper nasal breathing and the relapse of so many of his cases, Dr.--- was on board. He now realizes that orthodontic brackets exert five grams of pressure, which is no match for the tongue's five hundred grams. The tongue is going to display a frontal thrust (meaning the tongue moves forward, exerting force against the front teeth) in an attempt to maximize breathing due to an impaired airway. After all, we did not start to have a population with crooked teeth until after the Industrial Revolution that not only modernized our food industry, but introduced us to the advent of processed foods as well. It was after this epiphany that Dr.--- found the Deflame Diet helpful. In the end, spending the extra time with outside practitioners to allow them to appreciate the inherent value of our secondary Discourse is very much like our pt exam in which my co-workers and I explain test results: we show them visual tools and evidence-based research to back up our protocols.

Constructing Patient Understanding, Acceptance, and Compliance

While I no longer use my DH degree to make diagnoses because of the change in my scope of practice, I perform the role of a "choice architect" in conjunction with my doctor. Thaler et. al classify such a person as the one with "the responsibility for organizing the context in which people make decisions" (3). A choice architect is one who alters a situation with intention so that others are motivated to make choices that are to their personal advantage and, by extension, can potentially affect a whole community for the better. This is fundamental when healthcare professionals present txr plans including the outcomes as well as the benefits and risks if a pt should decline a given option or select a different one. We always try, when the situation permits, to enable a pt to offer his or her opinion in regards to which steps to complete first. However, the severity of a pt's case does not always allow for this.

> Doctor: *Now that you understand more about reflex testing*[xi]*, you know that you have a positive jaw joint injury that trumps your secondary acute sacral*[xii] *injury.*
>
> Patient*: But my jaw does not hurt; I am worried about breaking down my teeth and I just want to sleep better.*
>
> Doctor: *All bodily pain and injuries manifest in the face, specifically the masseters*[xiii]*. They're the muscles used when one clenches and grinds in response to pain, which is very stimulating at night. By treating your jaw, we'll also be helping your sleep.*
>
> Patient: *What if I am still fatigued and have trouble getting out of bed in the morning?*

Doctor: *As I previously mentioned, we have a few options left to pursue if we come to a roadblock and your symptoms fail to continue improving during the active phase of txr. You can proceed with your septoplasty*[xiv] *with Dr.---, which, if you are ready, you can do before we see you for your delivery*[xv].

Moreover, we have found that a pt tends to be more cooperative and receptive when we emphasize the fact that some of our findings were out of his or her control. Nothing from a pt`s past was done intentionally to contribute to his or her current situation.

Doctor: *I suspect you've had this breathing problem your whole life.*

Patient: *What breathing problem? I don't have one.*

Doctor: *You have literally breathed through your mouth this entire time. You also mentioned earlier that you're chronically congested.*

Patient: *Do you really think so?*

Doctor: *Absolutely and without a doubt! Honestly, you've never breathed through anyone else's nose before, so I wouldn't expect you to realize it.*

Patient: *Ugh, I could kick myself for my not wearing my retainers faithfully once I got my braces off. When I think of all that hassle...and on on top of it, the money I spent!*

Doctor: *Well, if it makes you feel any better, a retainer wouldn't have been enough. EXT (extracting) your first premolars didn't help your cause either.*

Patient: *So, this is my orthodontist's fault?*

Doctor: *Actually, that's how we did orthodontics back then. We didn't comprehend the connection between troubled breathing and tooth crowding.*

By removing the blame from both the pt and his or her previous practitioners, the pt is no longer dwelling in the past. Rather, he or she is recognizing that there is still the original problem that lingers, remaining to be addressed and treated so that the pt's crooked teeth do not continue to overlap even more noticeably.

On the Periphery and Looking in: Knowledge Transfers

as Truth in New Secondary Discourse

Attainment of my most recent Discourse in the TM world has been an eye-opening and humbling experience because it has actively advanced at a rate far ahead of my DH one. Despite my earlier belief about the ease with which I would step into this specialty (a direct result of my previous horizontal assumptions), it actually necessitated a vertical move in which I enrolled in CE's (continuing ed courses) multiple times a year rather than every other one. In order to perform at my best, I needed a more encompassing grasp, one that included current sleep literature. Such a quickly evolving Discourse involved overcoming a discrepancy in my accruing knowledge and there was a gap in what pts knew to be true too. Point blank, I often identify oral anatomy during pt exams that, at the time I was in hygiene school, were marked as normal anomalies[xvi] that are WNL (within normal limits). For instance, I tell pts that their bilateral mandibular tori[xvii] do not require removal but do alert us to a long-standing bruxing (clenching and/or grinding) habit—literally, form follows function. I stand up for the DH that the pts invariably begin criticizing as having not alerted them of this before now. I never speak ill of another professional (especially because I was not there), a critical lesson instilled in me by my doctor, a descendant in a long line of physicians. I inform the pts that had they been seen by me for a cleaning even three years ago, I would not have talked about tori either. I did not know what I did not know.

> Doctor: *As we have just found out together, you present with several risk factors for obstructive sleep apnea including tongue scalloping, those rivets along the sides of your tongue that we showed you in your intraoral*

photographs[xviii], *voiding multiple times throughout the night*[xix], *snoring, and teeth grinding. I'm going to write a letter to your family physician explaining my findings. That way he understands and can order your PSG*[xx], *or in-lab sleep study.*

Patient: *I don't care about that. Besides, I don't want to sleep connected to a bunch of wires and cords or have someone watching me as I try to sleep. It's just plain creepy if you ask me. Honestly, I'm only here for my snoring, which doesn't even bother me. It's really my wife's problem.*

Doctor: *I can assure you that suffocating at night is a very serious matter. You can go weeks without food and days without water…but you can only last minutes without air. Not to mention, it increases your risk of having a cardiac event, which may be just around the corner given you're already taking two blood pressure meds because one is not enough to control your HTN*[xxi]*. As far as the snoring goes…well that's important also. Ignoring it is like learning you're pre-diabetic and doing nothing to stop the progression of the disease process into full-blown Type II.*

The responsibility afforded me by my newest Discourse is very sobering in nature as well. I can recall the pleasure I felt as one of my "real" hygiene pts explained how at ease and comfortable he was with me, as was evident when the pt not only fell asleep, but began snoring loudly as I cleaned his teeth. In retrospect, all I can think about is how this pt likely had OSA, meaning his airway closed off when I put the pt's chair in a supine (flat) position. Furthermore, I am troubled with guilt for the many mental vexations I entertained as I cleaned the teeth of pts who I thought were unwilling to open their

mouths wider. The faces of these pts I currently suspect to be locked closed (indicating they are unable to open their mouths to the normal extent corresponding to the pts' facial structures[xxii]) haunt me to this day. Essentially, hindsight is 20/20—I feel regret for pts I could have helped, or nudged, had I possessed my present working knowledge.

It is my devastating belief in having failed my former pts that enables me, in my unique position in a new medical specialty, my primary secondary Discourse, to promote the vertical ed of my pts. This must be done at the expense of a plethora of facts pts obtain using online Internet search engines, a perfect example of Birkerts' sense of the crushing weight of too much information exposure, at least when offered in the absence of personal direction and guidance from an expert. According to Birkerts, "In our culture, access is not a problem, but proliferation is…The result is that we know countless 'bits' of information, both important and trivial" (72-3). Buried in negative connotations, this statement suggests one's attempt to master all available material (and by extension secondary Discourses) is simultaneously overwhelming and futile. It can be argued that this is the case in the absence of a mentor or master tutor. Internet sources like *WebMD*, in addition to television shows like *Dr. Oz*, cause pts to self-dx themselves with often worst-case scenarios involving extremely rare diseases. Such "diagnoses" are unfounded and steeped in the supposition that healthcare is "one size fits all." If medical practice was as easy as offering cookie cutter txr, there would be no need for medical providers or specialization in a secondary Discourse because everyone could easily gain membership and provide their own txr modalities.

The Fallacy of Commercial Sales: Preying on the Horizontally-Inclined

Popular media sources like *WebMD* and *Dr. Oz* literally nudge pts into choosing the latest fad, txr, cure, or product; this is not to be mistaken with Thaler et. al's understanding of the word in relation to the motivation of choices. Even though they are bogged down by consumerism and mass marketing ploys, such platforms at least have the good intention of promoting health consciousness and awareness. One such example of pt self-txr is when they take OTC (over-the-counter) sleep aids and sedatives. Manocchia et. al speak to the frequency with which pts "over-medicate their condition" (332). Such measures can have drastic side effects. What pts do not realize, and fail to understand, as a result of their lack of training on the subject matter, is that too high a dose of a supplement like melatonin can actually prevent them from reaching the necessary deeper stages of sleep. Although they may sleep longer and wake less often throughout the night, their quality of sleep is diminished. Daily use creates bodily dependency wherein a higher dose is required to produce the same effects pts initially experienced. This proves to be more detrimental than if they had done nothing at all. Nevertheless, pts' affinity for self-dx is a ringing endorsement of their horizontal engagement: they do not know enough on the topic to make educated and logical decisions about their own health. Nor do pts know enough to recognize that they are either under-informed, ill-informed, or just plain uninformed. They may take the time to attempt a vertical exposure to a given subject through thorough and rigorous research; still, pts do not have complete access to the necessary introductory knowledge and web searches do not (and cannot) replace direct experience and training. This is the epitome of horizontal comprehension. Thus emerges a pivotal truth: it is impossible to reach a vertical understanding within an established

Discourse without the help of others, mentors or experts that have already been initiated into a given secondary Discourse.

This discussion neatly ties in with the earlier conversational piece in which the pt was frustrated with the DH about even mentioning the dreaded topic of flossing. The pt incorrectly assumes, due to his limited, or horizontal, knowledge, that he only bleeds in response to my, or any other DH's, roughness. What he does not understand is that it is a tell-tale sign when gums bleed during a prophy (prophylaxis or preventative cleaning). Bleeding is actually a physical indicator of poor oral health. If the pt flossed regularly as has been recommended countless times before, he would know that this is not the only time his gums bleed. The pt is unwilling to learn more by expanding his knowledge base into a vertical depth, as is evident when he abruptly, and out of frustration, cuts any DH off mid-explanation. Shame on me as the DH, though, for letting the pt control the appt, foregoing the opportunity to instill motivation by openly sharing my information with him. Retrospectively, I was trying too hard to maintain harmony in the visit for fear that he would become too discouraged to show up for his next hygiene appt. His animosity about flossing masks his inclination to neglect his oral health by focusing on his dread of hearing the "same ol' " lecture. Nonetheless, had this conversation gone differently, it would be just one example of an expert in a given field enlightening a novice so that the pt may better understand his own gingival (gum) health. His unwillingness to be schooled on a topic like flossing is suggestive of the pt's overall hesitancy in adopting the dental world as an acquired secondary Discourse as he plainly discourages better pt-provider rapport and the opportunity for new educational topics.

Deliberate Practice: Discourse Initiation through Intensified and Guided Effort

This situation could have easily been resolved by conceding the value in physicians working together to share their knowledge with other professionals, specialists, and pts. Psychologist Anders Ericsson and Robert Pool's *Peak: Secrets from the New Science of Expertise* charts their journey to discovering what is essential for individuals to become proficient in a designated task, especially the training and necessary mentoring involved in achieving excellence. Their work concentrates on the prerequisites for becoming an expert in a given activity like playing the violin and Ericsson and Pool's contentions are applicable to specialization at large, such as that required for distinction in any secondary Discourse. Ericsson et. al's developed definition of deliberate practice is distinct from sheer quantity of practice. In their words,

> Deliberate practice involves well-defined, specific goals and often involves improving some aspect of the target performance; it is not aimed at some vague overall improvement. Once an overall goal has been set, a teacher or coach will develop a plan for making a series of small changes that will add up to the desired larger change (99).

Such ideas suggest one's betterment stems from informed intention and effort so that each new skill is practiced after competence is gained in an easier one and the stage of difficulty continues to escalate, with successive new challenges on the horizon. Of equal relevance, this process is not meant to be fun on an intrinsic level since it requires an individual to work to perform beyond the limits of his or her comfort in order to excel (Ericsson et. al 99). Deliberate practice features intensifying preparation with the aim of advancement whereas sheer practice is based strictly upon repetition. Whether one

partakes in deliberate practice or sheer practice is dependent upon one's individual and collective goals and the level, or stage, at which one desires to perform.

Hence, it follows that the medical profession is referred to as "practice" because we must continue to advance with the latest technologies, protocols, and literature by acquiring a given number of CE's in order to renew our licenses. Again, in returning to the interaction with my pt who loathed flossing and the mere mention of it, the relative stagnancy of the DH Discourse by both those who inhabit it and those who dabble in it is brought to light. Looking back, I can recognize that both sides of the line (patients and providers alike) accepted the boundaries of authority and neither side greatly trespassed these limits. My fellow DH's and I were trapped in a cycle of sheer practice as we functioned on autopilot, oblivious (and perhaps indifferent) to our own contentment. Having gained competency and success as professionals, we as DH's no longer dared to think outside of the box, to improve through innovation, or to grow. There was nothing to threaten our complacency. In contrast, my TM world is actively seeking to include both practitioners and pts through take-home materials, lectures, and educational presentations as well as informative advertising.

Fortunately for my co-workers and me, our appts serve as my team's means of deliberate practice; with each appt we are given the privilege to share newly-learned information (such as that obtained at CE events), allowing us to test different delivery methods (both verbal and non-verbal) for the disbursement of educational material to determine which approaches produce the best pt compliance. These visits are a form of deliberate practice for the pts as well—the more they come to our office, the more comfortable pts become with my team's vocabulary, terms, nudging, and identity kits.

The pts even begin adopting our terminology as they embark upon the journey of indoctrination into our secondary Discourse. In these instances, the appts and lectures are the vehicles for deliberate practice and my co-workers and I function as the mentors or instructors for our pts and outside healthcare professionals in other disciplines. The pts are the objects of our deliberate practice as we gage their reactions and responses to what our developing appts entail. To prove this point, as an assistant and pt liaison, I sit at an equal level with a pt when Dr.--- presents the pt's case and test results. My role is key in alerting him when I sense the pt is putting up walls or getting confused or upset, let alone so fixated upon a single idea that he or she is unable to move beyond it in order to follow the rest of the doctor's explanation. Consequently, the utilization of lectures and presentations, and different mediums for delivery of pt ed materials, represent the information I acquired as part of my vertical participation in the TM Discourse and are simultaneously the same tools we use as my team seeks to embrace others.

Nudging the Revelation of Team Work through Deliberate Practice

Overall, changing careers has taught me the powerful impact of a transition in dwelling from one of my main secondary Discourses to another, not only in terms of how I interact with fellow providers and pts, but with co-workers too. On the plus side, I embrace change as a sign of progress and I am in a field that believes in continued growth as well as vertical learning (and relatedly, the procurement of additional secondary Discourses). Even more, I currently share a mutual respect and solidarity with RN's as we collectively work to prevent pts from developing extensive cardiovascular histories by controlling their apnea. In considering that I presently help restore function to my pts' lives, it is with the heaviest of hearts that I can now admit that there is an element of truth in RNs' accusation that all DH's do are clean teeth (a concession that causes me to twinge for my previous self and cohorts).

In conclusion, my experiences have essentially worked to elucidate some vital truths. We, as practitioners, can never care for our pts more than they are willing to care for themselves[xxiii]. Even so, we can remove the barriers inhibiting their health awareness, initiative, and induction into respective secondary Discourses through the means of plain language, thoughtfully fashioned pt ed materials, and proper verbal communication. Such lessons offer information to take back and incorporate in my idle DH Discourse so as to reinvigorate it for the betterment of pt care and advancement of dental professionals' expertise. By offering these same tools to DH's, they can in turn diffuse their exclusive secondary Discourse by promoting active vertical pt participation in it. Doing this can help uphold the dental field as a truly preventative discipline as it can be and should be. Additionally, nudging, which ultimately designates the best option at the expense of the

most detrimental or least productive one, is necessary when interacting with pts and healthcare professionals as well. In a world in which practitioners feel pressured to make recommendations in-house, nudging one another into collaborative efforts will free them to refer pts to the specialists best suited to handle pt cases, regardless of an outside physician`s affiliations. The power of nudging within the medical field will expose and glorify teamwork for the sake of advancing pt care and prevent pts from succumbing to self-dx. The act of nudging is accomplished by tutors or masters, those participating in a given secondary Discourse. Equally relevant, expansion and promotion of a secondary Discourse is dependent upon the willingness and availability of these trainers to welcome non-members. Finally, spending so much time engrossed in my newest secondary Discourse has enabled me to personally continue improving as a member of my DH world because the proficiencies are transferable. The skillset that I have acquired in my TM Discourse through deliberate practice has helped to shape me as a better pt educator despite the hiatus in my clinical DH career.

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[i] This is not to be confused with PT, or physical therapy.

[ii] The whites of a person's eyes.

[iii] An expression dental professionals use to affectionately refer to the stench emanating from one's mouth who suffers with periodontitis (gum disease—an infection that attacks bone and soft tissue).

[iv] When I hear the term "calculus," I do not readily equate the word with a type of math class. Rather, I immediately think of chunks flying in my hair as I use an instrument to detach hardened residue from a pt's teeth.

[v] A procedure that frees the tongue by releasing the tissue that literally tethers it to the floor of the mouth, preventing its full range of movement.

[vi] A drop in one's oxygen levels. The alarms will sound for a pt in a hospital whose oxygen level drops two percentage points relative to his or her baseline, let alone dips below 90.

[vii] A cessation in breathing while sleeping for ten seconds or longer.

[viii] An elevated sugar content.

[ix] A phrase used in reference to one's innate ability, perhaps downfall, in viewing all situations from an optimistic perspective.

[x] Otolaryngologist.

[xi] Autonomic nerve testing developed by John Beck, an orthopedic surgeon, that allows clinicians to evaluate pts' involuntary reflexes as a result of pain and bodily injuries.

[xii] Low back.

[xiii] Cheek muscles.

[xiv] A minor outpatient procedure (we choose to use this designation in lieu of "surgery" because pts repeatedly panic at the mention of it) that allows for the correction of the curvature of the nasal septum, the bone that separates one's nostrils.

[xv] The appointment in which a patient returns to our office in order to receive his or her custom-made orthotic.

[xvi] Deviation along the spectrum of "normal."

[xvii] Bony growths deposited on the floor of the mouth.

[xviii] Photographs taken inside of a patient's mouth for the purposes of pt ed. This also comes in handy as a means of documentation when a pt makes the claim that an orthotic caused a shift in his or her teeth. My co-workers and I can compare the current position of a pt's teeth against the photographs from his or her initial exam to prove with physical certainty that this is not the case. It just feels like an individual's teeth are moving because we are putting the pt's jaw in an orthopedically stable position in which the lower jaw comes forward, altering the approximation of the upper teeth in relation to the lower ones.

[xix] Nocturia, or the need to urinate during the night, is abnormal. It is important to understand that an adult actually wakes in time to urinate, unlike in a child that unconsciously wets the bed during his or her sleep. This happens because an individual's hormone, vasopressin, is not adequately restricting water to the periphery of the kidneys so that its rate of flow is slowed until concentrated urine is released when a pt is awake in the morning.

[xx] Polysomnogram.

[xxi] Hypertension.

[xxii] To allow normal mandibular ROM, or ranges of motion. This includes moving the mandible, or lower jaw, laterally to the left and right as well as protruding, or shifting, the lower front teeth (mandibular anteriors) forward as far beyond the top front teeth (maxillary anteriors) as possible. This is monitored in addition to the pt's maximum opening. Sadly, I now know that the longer pts remain locked (three months or longer), the less likely this can be reversed with conservative measures due to the formation of fibrous adhesions (scar tissue).

[xxiii] A motto used within our office and said to pts who are resistant or unwilling to change their behavior or habits even when they acknowledge such alterations would be beneficial to their health. These words of wisdom were passed down to the doctor I work for from his father (who also happens to be a physician).

Exhibit A: Library of Dietary Guidelines

Source: Photograph taken by Kathleen Moran, 2017.

Exhibit B: PowerPoint Presentation Featured on Television in Our Waiting Room

Sources: Photograph taken by Kathleen Moran, 2017; PowerPoint slide featured is the product of the TMJ and Sleep Therapy Center of Northern Indiana, 2016.

Exhibit C: First Page of the Deflame Diet Patient Packet

The Deflaming Guidelines

How to Reduce Inflammation with Diet and Supplements

The information contained in the Deflaming Guidelines is consistent with the information found at www.deflame.com, the internet's most comprehensive website devoted to reducing inflammation with nutrition.

The focus of deflame.com and the Deflaming Guidelines is quite specific...to explain how to reduce a chronic inflammatory state with diet and nutritional supplements. This is an extremely important nutritional goal, as research now clearly demonstrates that our dietary habits can promote a state of chronic inflammation that leads to the expression of aches, pains, disability, and most chronic diseases, such as diabetes, heart disease, cancer, osteoarthritis, and neurological diseases such as Alzheimer's disease, Parkinson's disease and multiple sclerosis (1-7).

The Deflaming Guidelines are divided into five different sections.

Part 1: The Inflammation Checklist

Find out how many inflammatory factors are active in your life at this moment. The goal is to have as few as possible.

Part 2: Introduction to Basic Deflaming Concepts

Basic conceptual issues are discussed and simple steps to reducing inflammatory food consumption are introduced.

Part 3: Why Grains Inflame

The truth we must all deal with is that grains are simply not the appropriate food to eat as a staple food. Grains are best in condiment portions or not at all.

Part 4: Foods and Dietary Suggestions to Fight Inflammation

Provided is a thorough list of the foods that are anti-inflammatory, as well as suggestions regarding meals.

Part 5: Nutritional Supplements to Help Fight Inflammation

A simple and clear approach to supplementation is outlined, and supplement programs are presented.

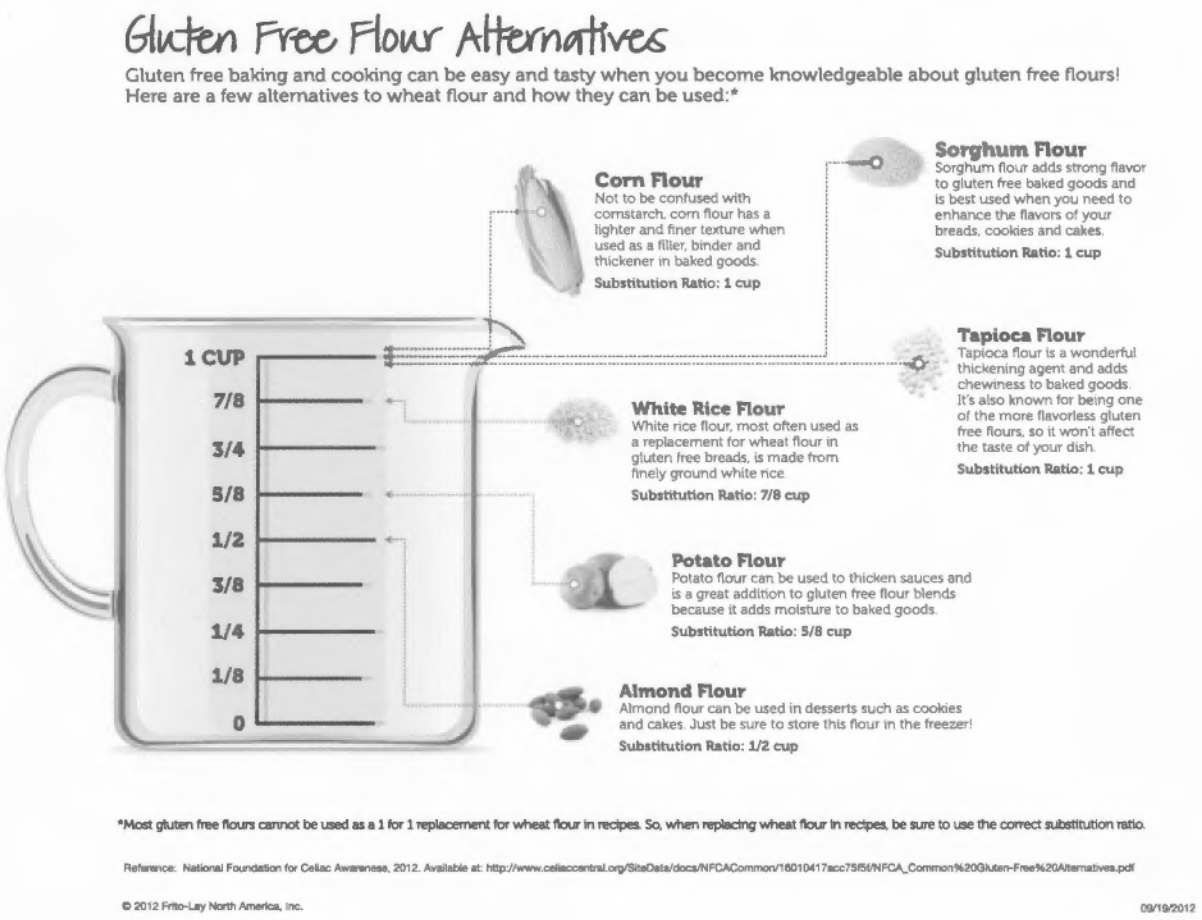
The Deflaming Guidelines work best when coupled with regular exercise.

Walking 1/2 hour to 1 hour a day is sufficient for many, while more intense exercise is preferred by others.

** An MP3 audio version of these guidelines is available at www.deflame.com, in which key highlights are discussed.

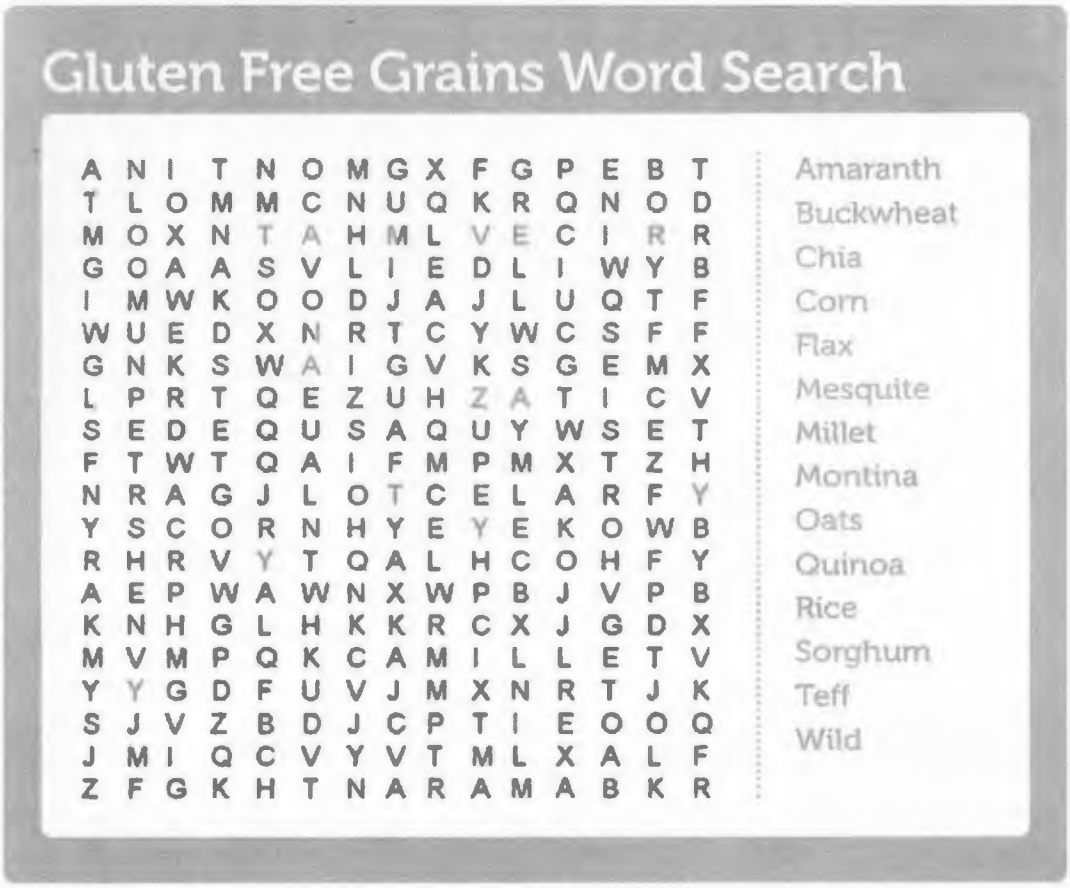
Source: Deflame Enterprises, 2009.

Exhibit D: Alternatives to Cooking with Flour



Source: Frito-Lay North America, Inc., 2012.

Exhibit E: Word Search Activity



References

Whole Grains Council. 2012. Available at: http://www.wholegrainscouncil.org/whole-grains-101/gluten-free-whole-grains

National Foundation for Celiac Awareness. 2012. Available at: http://www.celiaccentral.org/SiteData/docs/NFCACommon/16010417acc75f5f/NFCA_Common%20Gluten-Free%20Alternatives.pdf

Sources: Whole Grains Council, 2012; National Foundation for Celiac Awareness, 2012.

Exhibit F: Pocket-Sized Summary of Dietary Guidelines

Source: TMJ and Sleep Therapy Center of Northern Indiana, 2017.

Kathleen Moran

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Educational Profile

Master of Arts in English, IU South Bend
May 2017

- **Thesis**, "Nudging Patient Compliance and Inter-Provider Relations through Discourse Mobility and Deliberate Practice: Negotiating Choice Architecture in the Field of Craniofacial Pain and Sleep Disorders"

Bachelor of Science in Dental Hygiene, IU South Bend
August 2013 (highest honors)

- **Dean's List** **2011-2013**

Bachelor of Arts in English Literature, Saint Mary's College, Notre Dame, IN
May 2011 (*cum laude*)

- **Dean's List** **2007-2011**
- **Member**, Sigma Tau Delta **2010**
- **Member**, Beta Beta Beta **2009**

CPR Certification, American Heart Association
Renewal: 2018

Licensed and Registered Dental Hygienist, Indiana and Michigan
Renewal: 2018

- Certification in Local Anesthesia and Pain Management **Renewal: 2018**

Editing Experience and Publications

Editing and Publishing Internship, The Estate of John Kouroubetes
January-May 2016

- Transferred *The Greeks of Michiana* entirely into a digital format
- Revised and edited text to ensure it complied with current MLA standards
- Created publishing templates in Adobe InDesign to prepare the text for future publication

Graduate Research Journal, IU South Bend
April 2016

- Published "The Irish Goodbye"

Assistant Editor, Graduate Research Journal, IU South Bend
February 2016

Graduate Research Journal, IU South Bend
April 2015

- Published "Hawthorne and the Duality of Human Nature in 'Young Goodman Brown' and 'My Kinsman, Major Molineux' "

Blind Review Editor, Graduate Research Journal, IU South Bend
February 2015

Writing and Public Relations Experience

English and Dental Hygiene Tutor and Mentor
December 2013-May 2014

- Tutored an IU South Bend senior majoring in dental hygiene
- Prepared and studied for national examinations and licensure requirements as well as for classroom quizzes and tests
- Assisted with various writing assignments including blogs, research papers, and reflections from conception to completion
- Taught the finer points of the editing process and encouraged the development of well-honed problem-solving skills
- Mentored student in social and educational roles expected of dental hygiene students as well as encouraged the transition from student to professional

Research Assistant, Professor Theodore Billy, Saint Mary's College
May 2011-September 2011

- Assisted Professor Billy in the review of materials related to the development of his latest book
- Researched the use of houses, rooms, and other physical constructions and enclosures as symbols of the human mind or a female character's marital situation
- Analyzed "The Wind in the Rose-Bush" to aid in the professor's efforts to write about nineteenth-century American Gothic fiction
- Attended occasional meetings to work collaboratively to synthesize complex information into a coherent story
- Maintained organized, focused, and detail-oriented notes that summarized findings and logically-reached conclusions

Professional and Clinical Experience

Clinical Consultant, Ultimate Sleep Success System
October 2016-Present

- Advise established dental and sleep practices, both nationwide and in Canada, regarding best practices and strategies to progress into multi-million-dollar businesses in a short time frame (a year or less)
- Review scheduling and clinical operations to eliminate redundancies and enhance efficiency
- Emphasize proper communication, marketing, and training to streamline patient flow and promote same-day starts
- Provide webinars and presentations to doctors and supporting staff
- Maintain monthly call schedule for all offices
- Provide practices with training materials

Certified TMJ and Sleep Assistant, TMJ and Sleep Therapy Center of Northern Indiana
August 2014-Present

- Treat patients with TMD (Temporomandibular Dysfunction), craniofacial pain (jaw pain, headaches, and migraines), and sleep disorders
- Manage and ensure accuracy and timeliness of incoming and outgoing patient cases
- Educate patients about anti-inflammatory dietary guidelines and sleep hygiene recommendations
- Utilize technologies such as CBCT (Cone Beam Computed Tomography), JVA (Joint Vibration Analysis), intra- and extraoral photographs, and MNRT (Motor Nerve Reflex Testing)
- Created and implemented operating protocols for the laboratory
- Collaborated with colleagues in creating training manual for on-boarding new clinical assistants

Dental Hygienist and Assistant, Aspen Dental, Indiana
August 2013-July 2014

- Educated patients on adjunctive oral health care products via statistical data to improve overall patient health
- Campaigned for patients to save teeth (through methods such as the placement of locally applied antibiotics including Arestin and Atridox) when possible versus proceeding with extractions and dentures
- Used educational tools to increase the number of patients leaving with scheduled appointments and the necessary follow-up visits rather than allowing patients to postpone further treatment

- ❖ Recommended whitening procedures of clinical strength including personalized take-home kits and in-office Zoom whitening sessions in addition to the purchase of touch-up bleaching gel syringe kits
- ❖ Encouraged the use and purchase of take-home products including chlorhexidine rinse, stannous rinse, neutral sodium fluoride gel, and MI paste
- ❖ Promoted patients' transition from manual to electric toothbrushes as a part of daily homecare by selling Rotadent and Oral-B models with warranties and replacement parts

EDUCATIONAL PRESENTATIONS AND CLINICS

Young Women's Christian Association (YWCA), South Bend
- ❖ Educated diverse populations about dental health and drug manifestations in the oral cavity

Christ the King Elementary School, South Bend
- ❖ Educated kindergartners as well as first and second graders about caries formation and proper flossing techniques

Homeless Shelter Clinic Night, South Bend
- ❖ Provided clinical services and referrals, as needed, as well as health education to improve and maintain oral health for current residents

Project Help Haiti, Pierre Payen
- ❖ Spring break mission trip to Haiti that provided clinical services and education to promote the oral health of underserved patients and the general public, administered local anesthetic agents, and dispensed chlorhexidine gluconate as needed

Head Start, South Bend and Mishawaka
- ❖ Educated teen mothers about pediatric dental health, conducted intra- and extraoral exams, and dispensed fluoride treatments for children

Science Alive, St. Joseph County Public Library, South Bend
- ❖ Educated children and families regarding proper use of a toothbrush and the correlation between acidity and the caries process

Dentistry from the Heart and **Give Kids a Smile**, Mahoney Family Dentistry
- ❖ Performed infection control and sterilization procedures, offered hygiene treatment (including charting and radiographs) for South Bend's underprivileged, translated for Spanish-speaking patients, and referred patients to IU South Bend's clinic as needed

Oral Cancer Screening Night, Student Activities Center, IU South Bend
- ❖ Performed oral cancer screenings as well as palpated and visually examined gums for sores in IU South Bend's students, faculty, and staff

Sealant Clinic, IU South Bend Clinic, Riverside Hall
- ❖ Placed sealants on patients and dispensed fluoride treatments as needed

Additional Professional Work Experience

Student and Volunteer Hygienist, IU South Bend Clinic, Riverside Hall
January 2012-May 2013

Student and Volunteer Hygienist, Sister Maura Brannick Health Center
January 2012-May 2013

- ❖ Reviewed medical history and dental status to aid in the diagnosis of disease and proposed necessary treatment options
- ❖ Utilized familiarity with the Spanish language to relate with patients of varying backgrounds

Teacher's Assistant, Early Childhood Development Center
June 2011-August 2011

- ❖ Assisted teaching staff with student projects and led classroom activities
- ❖ Interacted with children and encouraged their autonomy in settling disputes

Receptionist, Human Resources, Saint Mary's College
August 2010-May 2011

- ❖ Completed secretarial duties (copying, faxing, and mailings) in order to assist in the recruitment and correspondence of potential staff and faculty members
- ❖ Provided campus tours to prospective students, faculty, and staff, highlighting various departments and programs
- ❖ Maintained confidentiality

Campus Involvement and Professional Affiliations

Member, Hoosier Hygienists	**2011-Present**
Member, Emerging Leaders, South Bend and Mishawaka	**Fall 2016**
Member, IU Alumni Association	**2013-2014**
Member, Student American Dental Hygienists' Association	**2011-2013**
Treasurer, English Club, Saint Mary's College	**2010-2011**